

CORRESPONDENCE

Taxonomic study of the genus *Deltonotus* Hancock (Orthoptera: Cladonotidae) with description of a new species

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Abstract The genus *Deltonotus* Hancock, 1904 was reviewed, including one new species, *D. wuzhishanensis* sp. nov. A key to species of the genus *Deltonotus* Hancock, 1904 is given. The type specimens are deposited in the Institute of Zoology, Shaanxi Normal University.

Key words Orthoptera, Cladonotidae, key to *Deltonotus*, new species.

The genus *Deltonotus* was erected by Hancock in 1904, with *D. tectiformis* Hancock, 1904 as type species. Hancock (1907a) transferred *Poecilotettix gibbiceps* Bolivar, 1902 into genus *Deltonotus*. Later in the year, Hancock (1907b) described another new species, *D. cristatus* Hancock, 1907 from Sri Lanka (Hancock, 1907b). Kirby (1914) synonymized *Deltonotus tectiformis* with *Tettix subcucullatus*. Hebard (1929) described *D. humilis* Hebard, 1929 as new. Zheng and Liang (1985) described *D. hainanensis* Zheng & Liang, 1985 as new. Blackith (1992) reviewed all five species of the genus *Deltonotus*. Yin *et al.* (1996) recorded all five species in 1996. Liang and Jiang (2004) described another new species, *D. guangxiensis* Liang & Jiang, 2004. However, Zheng (2009) transferred *D. guangxiensis* Liang & Jiang, 2004 into genus *Formosatettix* in Tetrigidae. Storozhenko (2011) described a new species, *D. vietnamensis* Storozhenko, 2011, and provided a key to the genus *Deltonotus*. By then, 7 species were included in the genus *Deltonotus*, mainly distributed in Sri Lanka, India, Vietnam and China. Besides, the two Chinese species are mainly distributed in Hainan and Guangxi.

When examining the insect specimens deposited in Institute of Zoology, Shaanxi Normal University, a new species of the genus *Deltonotus* were found from Wuzhishan area, Hainan Province. Now the new species is described as follows, the type specimens are deposited in the Institute of Zoology, Shaanxi Normal University.

Deltonotus Hancock, 1904

Deltonotus Hancock, 1904. *Spol. Zeyl.*, II: 111.

Type species: *Deltonotus tectiformis* Hancock, 1904 (= *Deltonotus subcucullatus* (Walker, 1871)).

Body small, with fine granules on the surface. Vertex wide, carina present; frontal ridge scutiform; antennae filiform, inserted between or slight below lower margin of eyes; eyes large; pronotum extremely compressus, tectiform, anterior margin produced over the head, hind process almost reaching or not reaching apex of abdomen; tegmina and hind wings absent; hind femora stubby, with length 2 times greater than its width; first segment of hind tarsus longer than the summation of length of the second and third segments.

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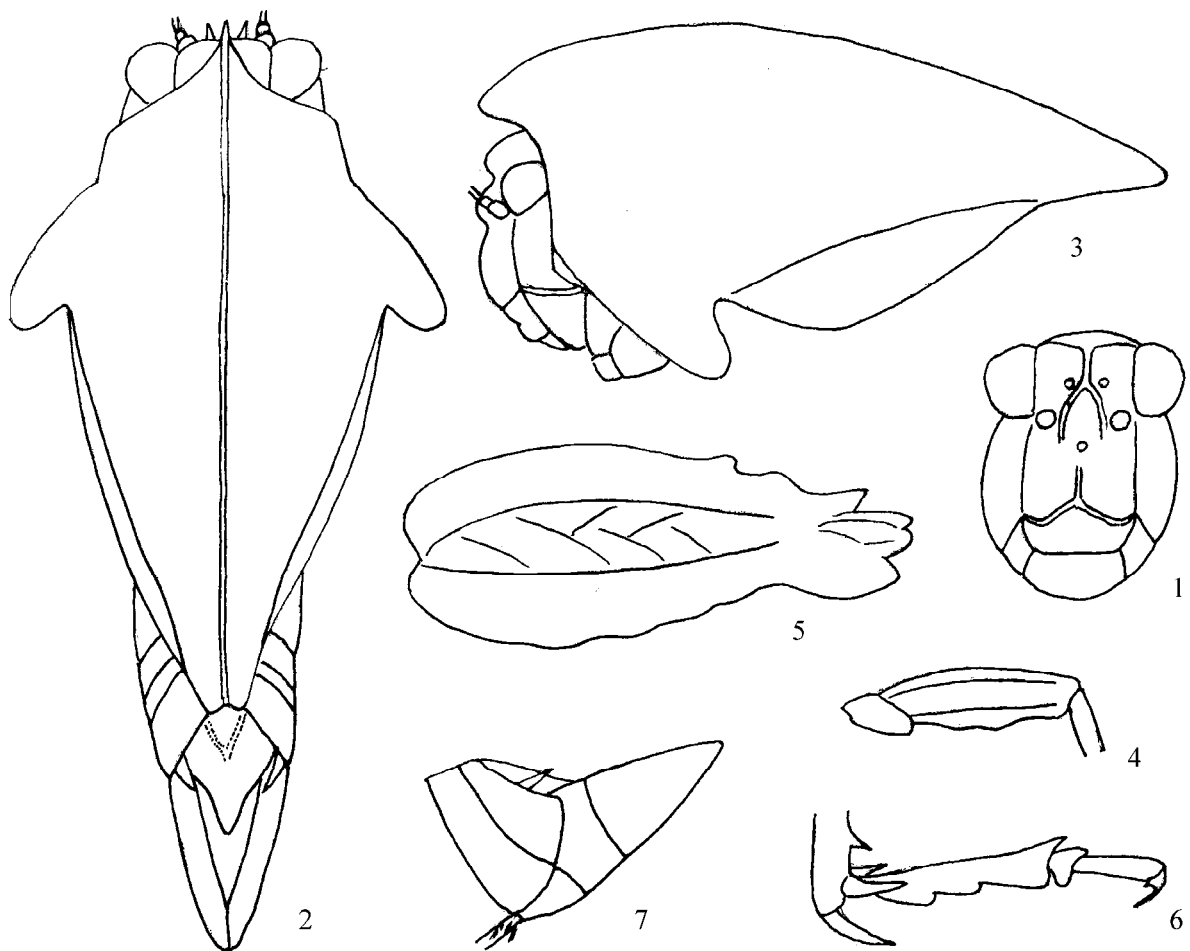
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***Deltonotus wuzhishanensis* sp. nov.** (Figs 1–7)

Diagnosis. The new species is allied to *Deltonotus vietnamensis* Storozhenko, 2011 and *D. hainanensis* Zheng & Liang, 1985. The main differences with *D. vietnamensis* are listed in the following key. It also differs from *D. hainanensis* in: width of vertex 2 times as width of an eye; frontal ridge with deep excision between eyes in lateral view, apex of hind pronotal process triangular depressed in the middle; the third pulvillus of the 1st hind tarsi larger than the first and second.

Description. Body small. Fastigium of vertex almost straight, not produced in front of eyes; width of vertex 2 times as width of an eye; frontal ridge with two deep excisions in lateral view; frontal ridge scutiform between basal part of antennae, width of frontal ridge about 2 times as width of basal segment of antennae. Antennae filiform, 13-segmented, inserted between lower margin of eyes, length of a segment in the middle 4 times as its width. Eyes global, protruding; lateral ocelli located between the crotch of frontal ridge. Pronotum compressus, tectiform, anterior margin produced over the head; upper margin arc-shaped in lateral view, anterior angle obtuse, apex slight produced before head; hind process short, reaching 2/3 of hind femur or basal part of supra-anal plate, apex triangular depressed in the middle; posterior angles of lateral lobes pointed back and downward, apex rounded; posterior margin of lateral lobes with only one depression. Tegmina and hind wings absent. Upper margin of fore femur entire, lower margin slight undulated; upper and lower margin of mid femur entire; hind femur stubby, with length 2.3 times as its width, upper carina with two protuberances near the apex, antegenicular denticles acute, genicular denticles obtuse, lower carina undulated. Outer side of hind tibia with 6 spines, inner side with 5–6 spines; length of the first segment of hind tarsi 2 times as that of the third segment, upper side of the 1st hind tarsi straight, the third pulvillus larger than the first and second, apices obtuse. Supra-anal plate long triangular, lateral margin contracted in



Figs 1–7. *Deltonotus wuzhishanensis* sp. nov., ♂. 1. Head, front view. 2. Body, dorsal view. 3. Head and pronotum, lateral view. 4. Fore femur. 5. Hind femur. 6. Hind tarsi. 7. Terminalia, lateral view.

the middle. Cercus short conical, small, only reaching half of the supra-anal plate. Subgenital plate long conical.

Body dark brown, hind tibia black, with 2 white rings in the middle.

Female. Unknown.

Measurements. Length of male: body 8.5–9.0 mm, pronotum 5.5–6.0 mm, hind femur 6.0–6.2 mm.

Holotype ♂, Hainan, Wuzhishan, Shuiman, 23–25 May 2007, coll. Yi-Bin Ba and Jun-Tong Lang. Paratype 1♂, same data as holotype.

Etymology. The specific name is derived from the type locality “Wuzhishan”.

Key to species of the genus *Deltonotus* Hancock

1. Pronotum with velvety black spot on each side near middle. Distributed in South India..... *D. gibbiceps* (Bolivar, 1902)
Pronotum without black lateral spots 2
2. Frontal ridge in lateral view with deep excision between eyes 3
Frontal ridge in lateral view with weak excision between eyes..... 5
3. Fastigium of vertex in dorsal view far produced in front of eyes. Distributed in South India..... *D. humilis* Hebard, 1929
Fastigium of vertex in dorsal view not produced in front of eyes 4
4. Anterior angle of pronotum acute in lateral view; lower margin of fore femur with two large teeth; lower margin of hind femur entire; upper margin of 1st hind tarsi with fine dentations, three pulvilli almost with equal length; lateral margin of supra-anal plate in male straight; subgenital plate in male short conical. Distributed in Vietnam *D. vietnamensis* Storozhenko, 2011
Anterior angle of pronotum obtuse in lateral view; lower margin of fore femur slight undulated; lower margin of hind femur undulated; upper margin of 1st hind tarsi straight, the third pulvillus of the 1st hind tarsi larger than the first and second; lateral margin of supra-anal plate in male contracted in the middle; subgenital plate in male long conical. Distributed in China.....
..... *D. wuzhishanensis* sp. nov.
5. Hind femur stout, with length about 2.0 times as its wide; lower margin of femora undulated, upper margin with fine serrations. Distributed in China *D. hainanensis* Zheng & Liang, 1985
Hind femur slender, with length 2.5–3.0 times as its width..... 6
6. Anterior process of pronotum reaching only middle of eyes. Distributed in Sri Lanka *D. cristatus* Hancock, 1907
Anterior process of pronotum covered the head completely. Distributed in Sri Lanka *D. subcucullatus* (Walker, 1871)

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